Introduction: A Challenge and a Vision

Water flows through every aspect of our lives. We depend on it for transportation, for power, for commerce, for inspiration—indeed, for life itself. Yet too often we take this precious resource for granted, or guard it so jealously for one purpose that we forget its fluid nature. Can we meet the challenge of safeguarding our water resources now and for generations to come? This Plan represents an attempt to meet that challenge, to take into account the many aspects of our water resource and the many needs it must meet, and to weave them into a unifying vision for the Delaware River Basin.

In 1769, a visiting Englishman commented on the "mess" in the Delaware River off Philadelphia—a mess that by World War II had become a stew of toxins that tarnished ships' metalwork and sickened sailors. The water lacked enough oxygen to support fish and other aquatic life. But the words of an old ballad posed a vexing challenge: To whom does the river belong? Management efforts were piecemeal, driven by conflicting interests over water diversions, dam construction, and fishing rights. It would take about half a century, two Supreme Court decrees, two record droughts and one record flood to bring

Supreme Court decrees, two record droughts and one record flood to bring about a sense of shared ownership of the vital resource that is the Delaware River and its tributaries.

In September 1961, President Kennedy and the four Basin state governors signed the Delaware River Basin Compact, creating the Delaware River Basin Commission (DRBC), and marking the first time in the nation's history that the federal government and a group of states had joined together as equal operating partners in a river basin planning, development, and regulatory agency. Through coordinated resource management efforts substantial improvements have been made in the quality of our shared waters. By 1981, for example, the DRBC's pollution abatement efforts had resulted in a 76 percent reduction in the amount of oxygen-demanding wastes being discharged into the Delaware River estuary, the tidal stretch of the river between Trenton and the Delaware Bay.

Today, the Delaware River supports year-round fish populations, offering excellent small mouth bass, striped bass, shad, and trout fisheries, once again sustained by the water's oxygen. Marinas are being built on the river's banks, along with bike trails and parks. The upper reaches of the River have received national recognition for their scenic

and recreational value including excellent water quality. However, we must remain vigilant, continuing efforts to maintain and improve conditions through cooperative management. As in the past, differences on how to manage the watershed remain. But we have come a long way towards recognizing our common concerns for a common resource. Now it is time to take the next step.

On September 29, 1999, the Governors of the four Delaware River Basin states (Delaware, New Jersey, New York and Pennsylvania) signed a resolution challenging the Basin community to develop a unifying vision: a comprehensive Water Resources Plan for the Delaware River Basin.

TO WHOM DOES THE RIVER BELONG?

The lines of the old ballad, "Uncle Sam's River" pose a challenge as pressing today as when it was composed:

The river belongs to the Nation,
The levee, they say, to the State;
The Government runs navigation,
The Commonwealth,
though, pays the freight.
Now here is the problem that's heavy—
Please which is the right and the wrong—
When the water runs over the levee,
To whom does the river belong?
—Douglas Malloch (1877-1938)

The Challenge

Water resources planning and management cut across traditional political and programmatic boundaries.

- The Basin covers 13,539 square miles, encompassing parts of four states, 42 counties, and 838 cities, towns, boroughs and townships.
- The Delaware River is the political divide between New York, Pennsylvania, New Jersey and Delaware.
- In all, nearly 15 million people, or roughly five percent of the U.S. population, rely on the River, its feeder streams, and its reservoirs for their water.

The Unifying Vision

In response to the Governors' challenge, the DRBC convened the Watershed Advisory Council. Composed of people representing a wide range of stakeholders, this group has worked together to forge a unifying vision for the Basin, a goal-based plan to guide policy and action to achieve the following results:

- Supply—Managing both the quantity and quality of the Basin's waters for sustainable use.
- Waterways—Managing the system of waterway corridors to reduce flood losses, improve recreational experiences, and to protect, conserve and restore riparian and aquatic ecosystems.
- Land Management—Integrating water resource management considerations into land use planning and growth management while recognizing the social and economic needs of communities.
- *Cooperation*—Strengthening partnerships for the management of water resources among all levels of government, the private sector, and individuals sharing an interested in sustainable water resources management.
- Stewardship—Providing opportunities to enhance appreciation and commitment to the protection, improvement and restoration of the Basin's water resources.

REASONS FOR DEVELOPING A BASIN PLAN

To establish a unifying vision for water resources management in the Basin

To identify a set of Objectives and strategies for achieving Goals and Desired Results

To better coordinate ongoing efforts to preserve, protect, and enhance the water resources of the Basin and the ecological, social and economic benefits they provide

To identify additional needs for more effective water resources management

To articulate roles and responsibilities

To recognize and account for all water resource uses in decision-making

To identify and consider the relationship between land use and water resources in decision-making

To invite all levels of stakeholders into the process of water resources management To duplicate the successes and progress of the last 30 years in the next 30 years

The Purpose of the Basin Plan

The purpose of the Basin Plan is to provide a unified framework for addressing and redressing new and historic water resource issues and problems in the Delaware River Basin. Toward this end, the Plan emphasizes an integrated approach: recognizing, for example, that water supply and water quality cannot be managed separately; that ground water and surface water are two aspects of the same resource, separated in time and space, but fundamentally interrelated. Integrated management means

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considering all aspects of the water resource in decision-making. Conversely, it means recognizing that a wide range of decisions—not just those traditionally associated with water management—can affect our water resources.

This Plan will show how the river that divides us also brings us together. The "Watershed Regions of the Delaware River Basin" map illustrates this point by assembling the Basin's many watersheds—areas drained by a single waterway or watercourse—into groups, or sub-basins, and by gathering sub-basins into regions.

The map is useful for characterizing and assessing baseline conditions, for prioritizing issues, and for developing regionally and locally specific strategies. Like this Plan, it is meant to help us think outside our traditional political and programmatic boxes, to think, rather, in terms of our watershed address—of our relationship to the river, its tributaries and watersheds, and how our plans and actions depend on and affect these resources.

Organization and Use of the Plan

This Plan sets a direction for policy and management decisions over the next thirty years and should be used as a guide for policy setting, decision-making and actions originating from governmental units, private entities and individuals. It forms a framework within which existing and new programs can be incorporated and coordinated for effective results. It also is meant to lead to new areas of research and study to support the achievement of the Desired Results.

To a large extent this Plan builds on the successes of a variety of existing and ongoing efforts, including the Comprehensive Conservation and Management Plan (CCMP) for the Delaware Estuary, and the management plans for the 152-mile reach of the Delaware River which has been included in the National Wild and Scenic Rivers System.

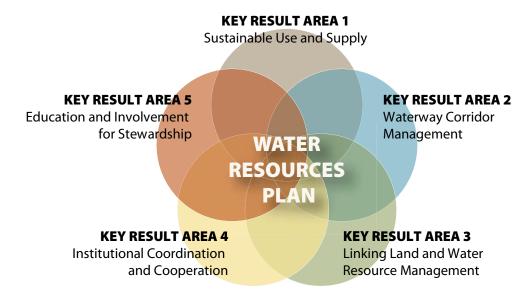


Figure 1: The Five Key Result Areas

The Plan is prefaced by a set of Guiding Principles against which all policy decisions and actions affecting water resource management should be measured. Many of the Plan's Objectives and strategies support more than one Goal, but all of them were developed—and should be implemented—with an eye to the Plan's Guiding Principles. The main body of the Plan is divided into five interrelated Key Result Areas. Attention to each of these five areas of concern is essential for the improvement of water resources management. An outcome statement—the Desired Result—has been articulated for each Key Result Area. Each Key Result Area has a set of Goals and Objectives essential to achieving the desired results for the Basin's water resources. The structure is illustrated in Figure 2.

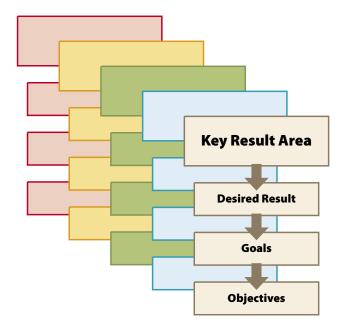


Figure 2: Water Resources Plan organization

The number of a Goal or an Objective is for convenience and reference and does not imply any priority or ordering within the Plan. The narrative for each Goal includes a brief notation of associated issues and provides background for the Objectives. Objectives are displayed in the Matrix of Goals and Objectives (beginning on page 48) with milestones, indicators to measure progress, and a cross reference of all the Goals with which the Objective is associated, since many Objectives relate to more than one Goal. The interrelationships noted in the Objectives Matrix highlight the need for integrated management, the theme of this Basin Plan.

The milestones and indicators in the matrix suggest the time frames for interim results and means of accounting for or measuring success. Developing meaningful measures of success and realistic time frames for accomplishing Objectives will depend on continued, careful assessment of conditions and identification of strategies appropriate to physical, political and fiscal circumstances. It will also require the coordinated effort of all partners.

Roles and Responsibilities

Many of the actions needed to make progress on meeting the Goals and Objectives of this Plan can be taken under the authority already granted to the myriad federal, state, regional and local agencies, authorities and commissions that operate within the Basin and its watersheds. These entities are responsible for:

- Water quality
- Water supply
- Wastewater planning
- Stormwater management
- Environmental resource protection
- Flood control
- Economic development
- Transportation network planning
- Construction and maintenance
- Oversight of development and construction standards
- Land use planning and growth management

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In addition, there is a host of non-governmental organizations whose actions as stakeholders in the Basin complement those of the governmental sector. These include: watershed associations; civic associations and citizen action groups; foundations that support water resource research and protection; academic and research institutions; professional associations; and associations of municipal leaders.

The Delaware River Basin Commission plays an essential role in improving coordination and collaboration among these entities. The 1961 Compact granted the Commission broad planning and regulatory powers in the areas of water supply, pollution control, flood protection, watershed management (including soil conservation and fish and wildlife habitats), recreation, hydroelectric power, and surface and ground water allocations and diversions. These powers should be used to educate as well as to regulate; to demonstrate the principles of integrated water resource management; and to foster partnerships with and among other public and private entities to achieve the outcomes articulated in the Plan and the collective stewardship of shared resources.

The Importance of Integrated Management

The concept of "integrated management" is reiterated throughout this Plan. Like water itself, managing our water resources must infiltrate everything we do. Viewed individually, the actions we need to take appear to be many and perhaps isolated. A glance at the Goals associated with an Objective will indicate otherwise, and will underscore the interrelated nature of water resources management. This Plan provides a framework for understanding the many connections—particularly those linking water and land—and for integrating our actions to achieve a shared vision for the Delaware River Basin.

Measuring Progress

Much has been accomplished since the initial passage of national and state pollution control and environmental legislation in the second half of the last century. States have established environmental protection and conservation agencies, adopted rules and standards to govern withdrawals from and discharge to their streams and rivers, and begun developing criteria for the protection of human and aquatic ecosystem health. Each state has developed programs and set priorities, making varied progress across an array of water resource issues. This Plan sets a structure for taking stock of these achievements and for identifying where these efforts have fallen short.

Existing programs and plans form the foundation of progress already made in the water resource arena. It is on this foundation that we will build, and from this baseline that we will measure our progress. Our ability to measure progress toward achieving this Plan's Goals and Objectives requires us to:

- 1. Assess baseline conditions to use as a benchmark;
- 2. Monitor and report those critical indicators which, taken all together, signal the improvement or deterioration of conditions in the Basin's watersheds.

The watershed is the focus of our efforts. Positive outcomes will be measured here; failures will be felt most acutely here. Our quality of life depends on our success.